

What is the Indoor Air Quality In Your Post COVID-19 Classrooms?



Our Children will Thank You

There are many areas that need attention as the children return to school. INDOOR AIR QUALITY is one of the most important ways to prevent the transmission of disease among students.

Introducing fresh air, expels germs, virus, droplets and other infections to protect the teachers and students and make your classroom a safe place for all.

What is The 'Indoor Air Quality' In Your Post COVID-19 Classrooms?

It is the responsibility of every school administration to assure parents and staff that you have minimised the risk of infection when welcoming students back to school.

Additional fresh air in indoor areas is the NUMBER ONE safeguard to virus protection.

https://www.school-news.com.au/news/schoolsneed-ventilation-for-better-health-and-student-learning-not-air-conditioning

Why Fresh Air?

Current Government requirements all centre around social distancing and hygiene.

What cannot be overlooked is the fact that Australians now spend up to 90% of their time indoors often without adequate Fresh Air. It goes without saying that having clean air indoors is crucial for the health of the population, in particular our vulnerable groups such as the elderly and our children.

School building require heating and cooling, but the fresh air component is often neglected.

Where fresh air is absent, classroom air is recirculated, along with the health allergies that exist with children. "If you don't have ventilation, it will result in terrible indoor pollution and high biological contamination. Air-conditioning without ventilation for schools is the worst possible solution you can imagine."

SCHOOL NEWS AUSTRALIA

How to Calculate the Amount of Fresh Air Required in Your Classroom

Fresh Air requirements are outlined by the Building Code of Australia and documented in the Australian Standard AS 1668 Part 2.

This existing standard requires the introduction of fresh air in buildings to be:

For students up to 16 years of age – 12 l/sec per person
For students over 16 years of age - 10 l/sec per person

Fresh Air has a very significant impact on Air Quality and where fresh air is absent classroom, air is recirculated with all the health allergies that exist with children.

A minimum of 12 l/sec per person for a classroom of 25 occupants, simply means you need 300 l/sec continuous supply of fresh air.

The Five Key Recommendations for Indoor Air Quality

1. Air Circulation

To maintain proper air circulation the air change rate should be 6-8 air-changes per hour in the room so that adequate air movement is maintained.

2. Filtration

All heating or air conditioning units should contain filters. Filters installed in most units only remove dirt and dust which are the large particles in the air leaving the small particles to recirculate in the classroom. These filters rely on regular maintenance which is often neglected. High efficiency filters can remove pollen and smaller particles but will still not remove virus particles.

3. Fresh Air Using Energy Recovery Ventilators

Energy recovery ventilators are commonly used in classroom applications and they are an efficient way to continuously introduce Fresh Air in classrooms to meet the statutory requirements, improve the indoor air quality and provide a safer environment for the occupants. Energy recovery ventilators bring fresh air into the classroom while expelling stale, contaminated air. Both the fresh air and the exhausted air go through a heat exchanger which recovers heat from the exhaust air and transfers it to the incoming fresh air without any cross contamination. Filters are incorporated to maintain the efficiency of the heat exchanger and filter the incoming fresh air.

4. UV-C Air Purification

Germicidal light are used in specific applications to kill pathogens like bacteria and viruses. UV-C lights alter the pathogen DNA, destroying their ability to multiply. Because of its pathogen fighting ability UVC is believed to have the ability to stop the novel coronavirus and other viruses from spreading. UV-C light is extensively used in hospital, clean rooms, medical labs, schools and day care centres. UV-C lights can be installed in the ductwork of the air conditioning system or in a small housing which consists of a fan, UV-C light and filters. These unit are easily mounted, run off single phase power and are suitable for up to 30-40 occupants per room.

5. Indirect Evaporating Cooling (INDEC)

Indirect Evaporative Cooling has recently been introduced into Australia and is very effective in dry climates to produce cool air without any added moisture. Indirect evaporative cooler use 100% fresh air instead of recirculated air. The unit does not have any CFC gases and has very low running costs.



What Next?

A simple addition of a ceiling mount XCM300 could be the solution to mitigate your risk and improve cognitive skills in your learners.

Your air conditioning contractor can advise the correct design using Armcor Energy Recovery ventilators to introduce the needed fresh air without pushing the energy bills through the roof.



Fresh Air Indoors

For more informationw: armcor.com.auE: sales@armcor.com.auP: 03 8301 9200

109-111 Northcorp Blvd Broadmeadows VIC 3047

